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ABSTRACT

While it is a common complaint that there are no established standards for determining what constitutes quality foreign language software, a 1984 review of the literature revealed that there exists more consensus than confusion. Although there are not many articles that directly address the issue of quality software, many writers do touch on the subject. Considerable agreement was found in the areas of content, ease of use (user-friendliness), screen format, and organizational and technical considerations. One area of disagreement was whether or not materials should be scrolled on screen. Other individual differences of opinion were found, relating to the language to be taught or the instructional level, but overall, opinions were found to be quite similar. The literature review was based on a two-year ERIC search and a bibliography put together by Mark Seng of the University of Texas at Austin. (MSE)

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FOREIGN LANGUAGE CAI: CONFUSION OR CONSENSUS?

by

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ABSTRACT

Currently in vogue is the complaint that there are no standards for determining what constitutes quality foreign language software. Upon researching the question, it actually seems that there exists more consensus than confusion. While there are not many articles that directly address the issue of quality software, many do touch on the point.

KEYWORDS

Drill and practice, tutorial, simulation, computer-assisted instrucion (CAI), ERIC, user friendly, feedback, scrolling.

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Many facets of computer-assisted instruction (CAI) appear controversial - even the proper nomenclature. While British and Canadian jounals favor the term "computer-assisted learning (CAL), some American authors use "computer-assisted learning" (CAL), and "computer-assisted language instruction" (CALI), while one American authority even uses the term "computer-based education" (CBE):

> The term "computer-based education (CBE) is used instead of "computer-assisted instruction" (CAI) to encompass a broader spectrum of computer applications than CAI. The latter has come to mean primarily computer managed instruction, instructional simulation, and inquiry. (Hall, 1982)

However, since the acronym CAI seems to be the most generally accepted, it will be used in this paper to cover the following:

1. drill and practice
2. tutorial
3. simulation
4. testing
5. educational games

Just as the very terminology is somewhat controversial, however, even more so seems to be that of agreement as to what constitutes good quality CAI software. Indeed, Vickie Blum Cohen asserts:

> At present, no widely agreed-upon standards or criteria exist which would help to define what an effective software program is. Developing standards and evaluation procedures has been a difficult problem in that there has been a wide range of opinions over what the "ideal courseware product" should be and what we should be aiming for in the way of courseware as technology becomes more

capable of extending its potential. (Cohen, 1983)

A study of the literature, however, reveals an amazing consensus of opinion on the part of many writers who write about this subject, even though they may touch upon it only briefly.

METHOD

While it may be said that many persons perceive a lack of consensus concerning widely-agreed upon standards, this paper attempts to demonstrate that in fact many authors are in substantial agreement as to what these standards are. Perhaps what has been lacking is the attempt to investigate current articles on the subject to verify such assertions, which is precisely the aim of this paper.

Based on a two year ERIC search conducted on June 12, 1984, seventy articles were identified as having to do with CAI. Using the extensive resources of the Perry-Castaneda Library of the University of Texas at Austin, most of these articles were located. Further, a bibliography put together by Dr. Mark Seng of the same university entitled "Foreign Language -- CAI" was consulted for additional information. From these sources, journals were identified that were likely to contain articles pertinent to the issue, and therefore back issues not included in the initial ERIC source search were also consulted. Especially helpful were the journals Education Technology, CALICO, System, Foreign Language Annals, Studies in Language Learning, and Electronic Education. Robert P. Taylor's book, The Computer in the School: Tutor, Tool, Tutee served as general background reading.

FINDINGS

After reading all the articles that appeared to address the issue of overall quality of CAI programs, twenty-six of them were identified as partially covering the topic (see bibliography). Only one article was found that directly addressed the question of what constitutes quality foreign language software, titled "Programming/Evaluating Second Language CAI" (Tuttle, 1983), which suggests that perhaps this area needs more attention.

With such an apparent lack of articles that deal in depth with the assessing of quality foreign language software, and because of the scattered references in many articles dealing with this topic, this paper will attempt to arrive at a useful summary of just what it is that constitutes quality foreign language software at this point, realizing that any statements here may soon be outdated.

The point should be made, before continuing, that perhaps some of the disagreement over quality CAI software is due to concerns regarding the proper pedagogy of the materials. Since this paper is not language specific, i.e., Spanish or French CAI, that topic is not considered as being within the scope of this article.

AREAS OF GENERAL CONSENSUS

Outside of pedagogical concerns, then, general agreement was found to exist in the following areas of consideration: content, ease of use (user friendly), screen format, and organizational and technical considerations.

The spcific points of agreement were as follows:

CONTENT

1. Appropriate use of the computer (more than a page turner")
2. Accuracy of the materials (freedom from grammatical and mechanical errors such as spelling)
3. Appropriate depth of material

USER FRIENDLY

1. Menu-driven, user control of sequence
2. User control of rate of presentation
3. Can be used without extensive instructions
4. Help available on the screen
5. Crash proof (i.e., does not "lock up" easily)
6. Handles wrong answers appropriatly (more than "Sorry, try again")
7. Ease of correcting input
8. Avoids long and multiple pauses
9. Directions free from jargon, easy to understand

SCREEN FORMAT

1. Uncluttered, clear presentation
2. Appropriate use of graphics for intended users
3. Appropriate screen changes
4. Use of foreign characters
5. Ease of inputting foreign characters (rather than # for e, * for a, etc.)

ORGANIZATIONAL AND TECHNICAL CONSIDERATIONS

1. User can exit easily at any time
2. End score provided
3. Appropriate use of sound
4. Randomized questions
5. Randomized reward statements in the target language
6. Teacher modification possible
7. Appropriate feedback for wrong answers (where the wrong answer routine is not more appealing than the correct one)
8. Branching (ability to adjust the program for more advanced or less knowledgeable students).

Of course, all the above are not necessarily part of any one program, and the type of program will often determine which of the above are most important.

ITEMS OF DISAGREEMENT

Interestingly enough, only one item was found that the various authors disagreed on - that of scrolling (having the screen roll up or down to change the material presented). Some authors called for appropriate scrolling, while others considered scrolling to be undesirable in all circumstances.

Of course, some other individual differences were noted. Some of these were due to the subject matter to be taught, and others due to to level of instruction (elementary, secondary, college). In spite of some small differences, the similarity of opinion as to what constitutes quality software was most striking. Of course, another possibility is that there is a wide gap

between "what is possible" and "what is being done now".

But in view of this finding, perhaps the above list could serve as a starting point to identify quality foreign language software, as well as promote discussion to further refine what was found to be "widely agreed upon standards".

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